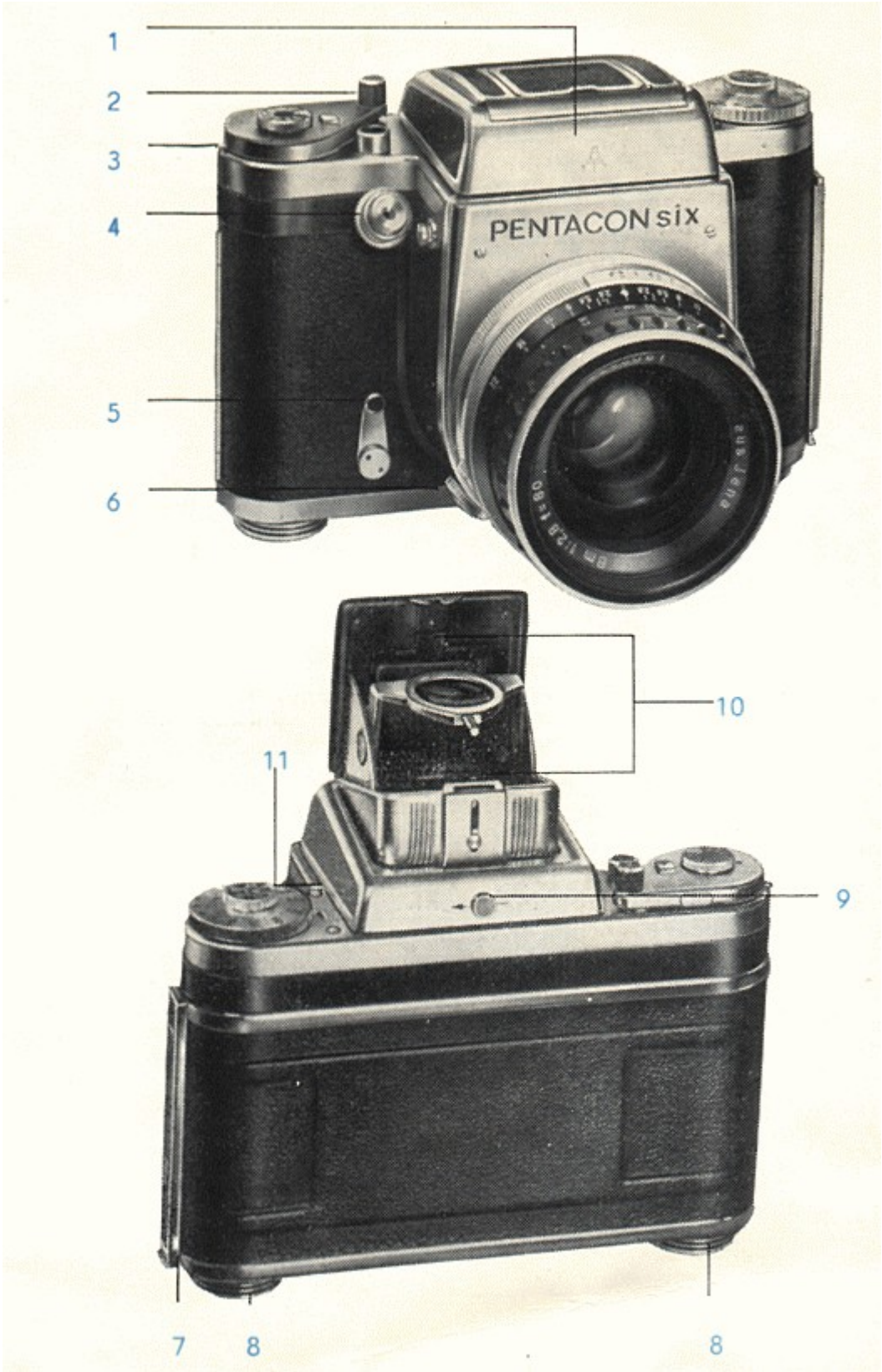
Pentagon six

Instructions for use.

You're now the fortunate owner of a Pentagon six. This camera is simple to operate yet it is not a simple camera. Quite on the contrary. The Pentagon six occupies a unique position in the giant host of cameras. Its technical composition has been devised to meet the requirements of a select group of photographers, those were discriminate to the extreme. He who buys a Pentagon six camera is perfectly acquainted with his craft and knows how to handle camera. This is a well-known fact, but is not a reason for abandoning the instruction manual, for every piece of equipment has its special features and peculiarities. This coming in turn is mainly due to the efforts of our skilled designers were continually working out new ways of improving and simplifying. Hints: even the best informed will find it profitable to study and instruction booklet. You will certainly derive advantage from practicing the various manipulations described in these instructions. The more you for yourself from thinking about technicalities the more you will gain on pictorial side and the greater will be your pleasure in owning a Pentagon six.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PENTACON six
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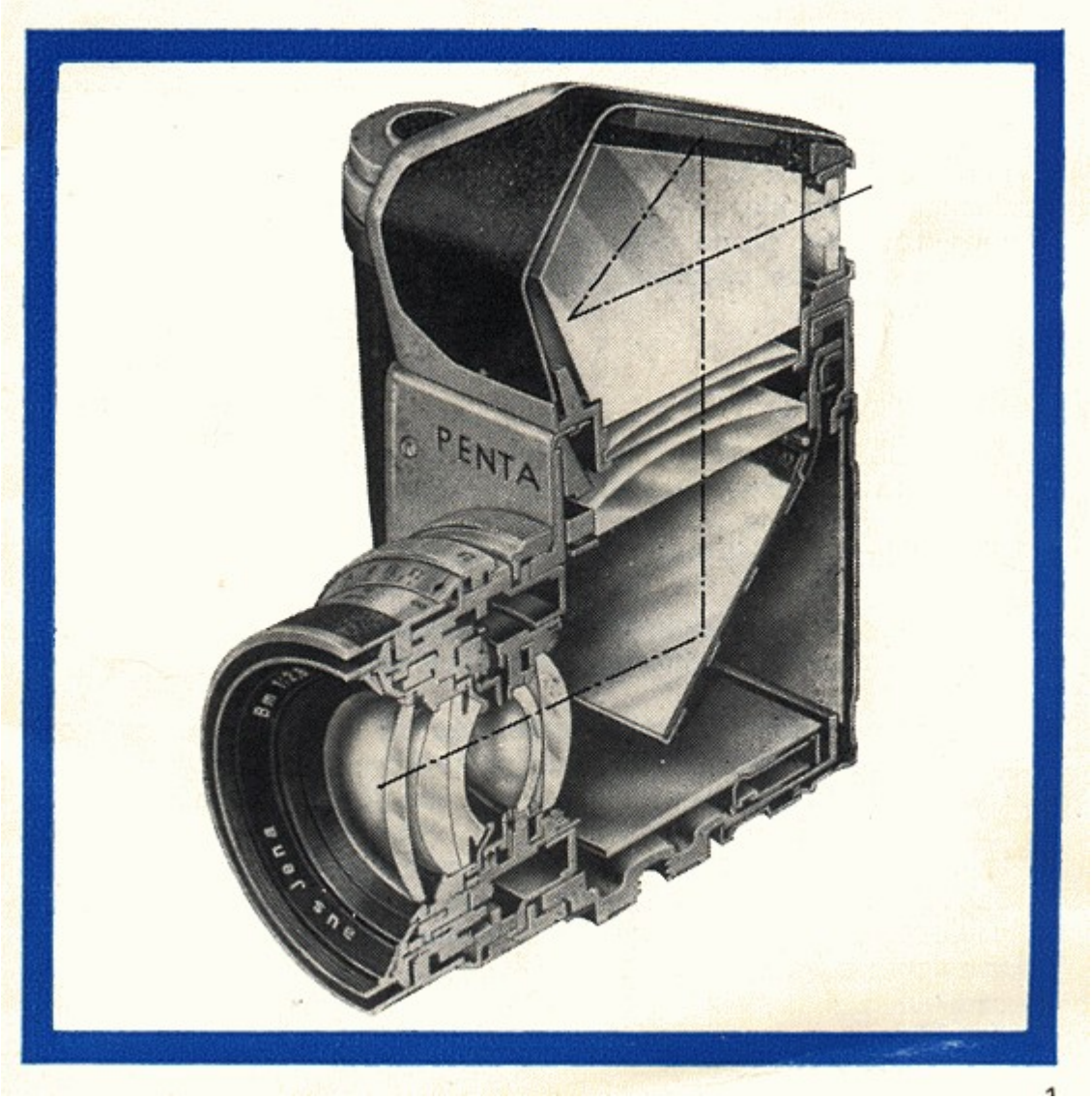
Important parts of the camera

1. Finder hood
2. Rapid wind lever
3. Disconnecting lever
4. Shutter Release
5. Winding lever for delayed action mechanism
6. Flash socket
7. Latch for camera back
8. Spool support
9. Knob for opening the finder hood
10. Frame finder (sports finder)
11. Knob for unlocking finder hood
12. Film type setting dial
13. Speed setting dial
14. Magnifying lens for focusing
15. Locking ring for shutter release
16. Film speed setting dial
17. Exposure counter
18. Milled ring for fixing the lens
19. Lever for checking depth of field
20. Diaphragm setting ring
21. Depth of field scale
22. Focusing ring
23. Tripod socket

There are parts of your Pentagon six which are not to be touched. To prevent an approach, they are inaccessible without application of force. Yet it is very informative to have a look into this hidden domain, which is made possible by the cross-sectional view given here. We are thus revealing the secret to which this camera model always is indisputable singularity. We see the finder system controlling the camera, which is pre-eminently able to make complications in modern photography so uncomplicated. The system which, in an amazingly simple manner, combines camera, lens, and accessories in countless variants to form an organic whole and which produces picture-taking possibilities greater in number and degree of perfection than those of any other type of camera.



Regarding the exterior of the camera: you unfold the two inner pages of the front and back covers and look at the camera itself in the same position as it is illustrated in the instructions for use. The most important parts are marked by numbers and explained alongside. The same numbers appear in the text, and the unfolded cover pages make it easy for you find the operating controls and procedures described.

Abridged instructions

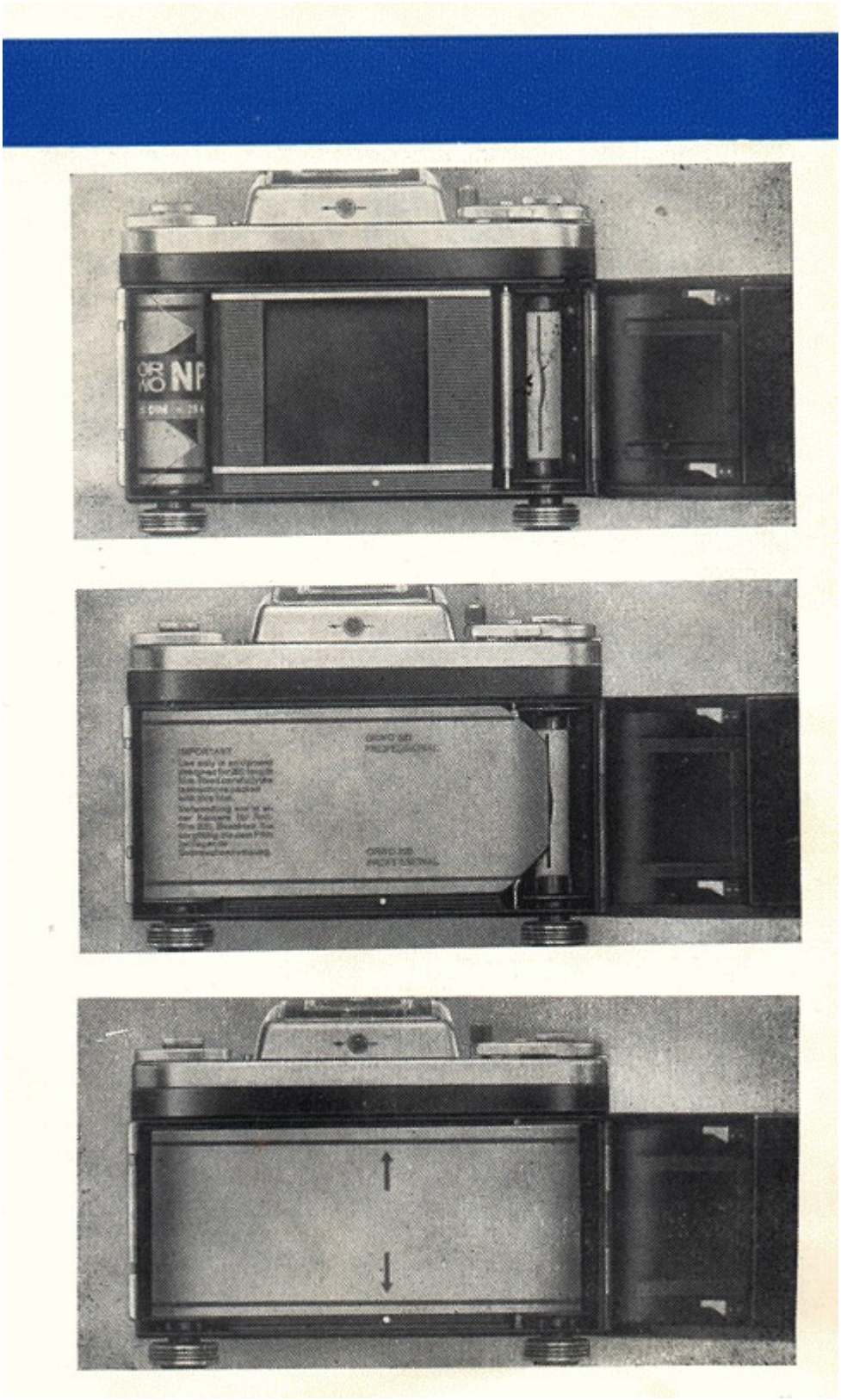
The following abridged instructions are a summary of the most important sections of this instruction booklet. The sections deserve particular attention. Yet the knowledge acquired by reading them alone cannot compensate for the valuable information to be obtained by studying the complete instruction manual.

1. **Pull latch (7) is downward and open camera back. Exposure counter (17) jumps to starting point.**
2. **Place film into left-hand spool chamber.**
3. **Remove gumstrip, pull paper leader across picture gate and push into the longer slit of the receiving spool.**
4. **Swing rapid wind lever (2) around as far as it will go and continue advancing the film by small rocking movements until the reference marked imprinted on the paper leader stands against the White Dot on the picture gate. Now move rapid wind lever (2) back to its initial position and close the camera back. The short rocking movements of the rapid wind lever may be performed only will film is being inserted, i.e. as long as the camera back is open!**
5. **Set film reminder dials (12 and 16).**
6. **Release the shutter and cocked it again four times. The rapid wind lever (2) must be swung without interruption as far as it will go and moved back. The exposure counter (17) shows the mark for picture 1.**
7. **Employ viewfinder image for focusing. Critical focusing is performed by means of the magnifying lens.**
8. **After the 12th and (in case of film 220) the 24th exposure the winding mechanism is locked. It is released by means of this connecting lever (3), whereupon film transporting can be continued.**

9. After the 121" or 24`", frame has been exposed, or in case of premature removal of the film, the paper trailer has to be wound up by full swings of the rapid wind lever and subsequent releasing of the shutter. No short rocking movements of the rapid wind lever (see also section 4).

Inserting the film

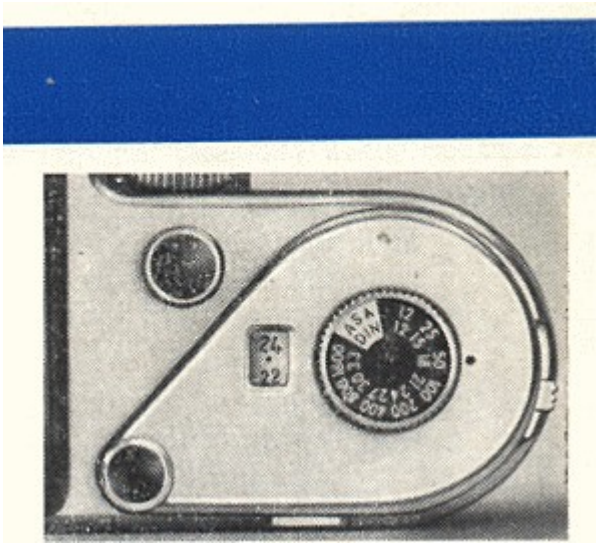
Inserting a film starts, of course, with the unlatching and opening of the camera back. Any type of commercially available roll film 120 for 12 exposures 6X6cm(21/a X 21/4) and roll film 220 for 24 exposures 6X6cm (2'/< X 21/<) may be used in the camera. The film is inserted as follows: retract the two film spool supports (8), rotate them to fixed position, place an empty intact film spool into right hand spool chamber, making sure that the carrier mechanism catches the spool core, unlock the spool support and let it spring back, and the pivot pain will engage in the spool core. The full film spool is inserted into the left-hand spool chamber in exactly the same manner. Removing the film will be referred to later on. Once more with regard to inserting it: swing rapid wind lever (2) is around as far as it will go and continue advancing the paper leader until the reference marked imprinted on it stands against the white dot on the picture gate. Taut and even winding of the paper leader is necessary to avoid faulty film feed periods. After this, move the rapid wind lever back to its initial position. It is of special importance to note that the short rocking movements of the rapid wind lever may be performed only while the film is being inserted. I.e. only as long as camera back is open. **With the camera closed- even without a film in it- they are not permitted.** Closing and locking the camera back concludes the procedure of inserting the film.



The exposure counter

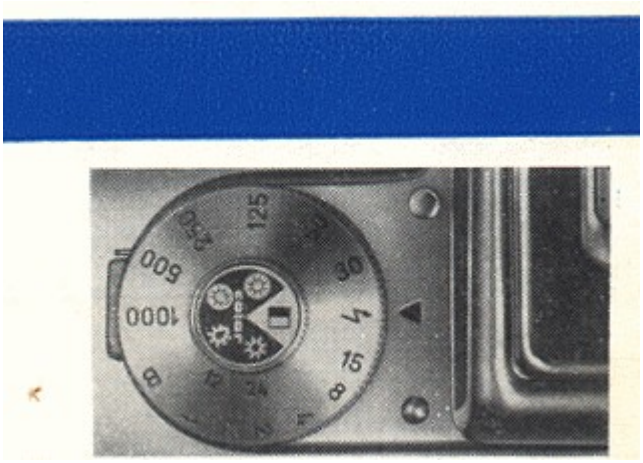
The exposure counter (17) jumps back to starting point when the camera back is opened and is automatically set when the camera back is closed. The shutter has to be released and cocked again four times, whereupon the mark for picture 1 will appear in the exposure counter. Do not let the winding lever jump back but move it back smoothly. At every

subsequent cocking of the shutter, the cocking mechanism advances to the next number. After the 12th and any case of roll film 220, after the 24'" exposure, the winding mechanism is locked. It is released again by means of disconnecting lever (3), so the rapid wind lever can be actuated again steadily and without interruption.



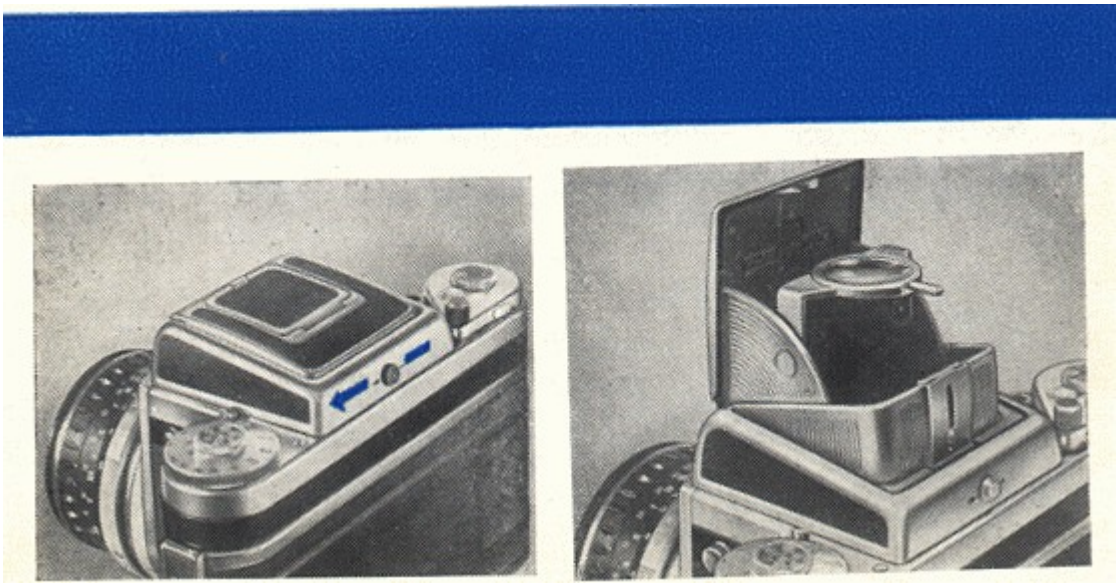
Film reminder dials

Film reminder dials (12) bearing symbols for black and white and color film, is mounted above the speed setting dial (13) is. The symbol required is set for roll film 120 against the numeral 12 and for roll film 220 against the numeral 24 on the speed setting dial. A second film reminder dial (16) marking the film speed in DIN and ASA readings is positioned above the rapid wind lever.

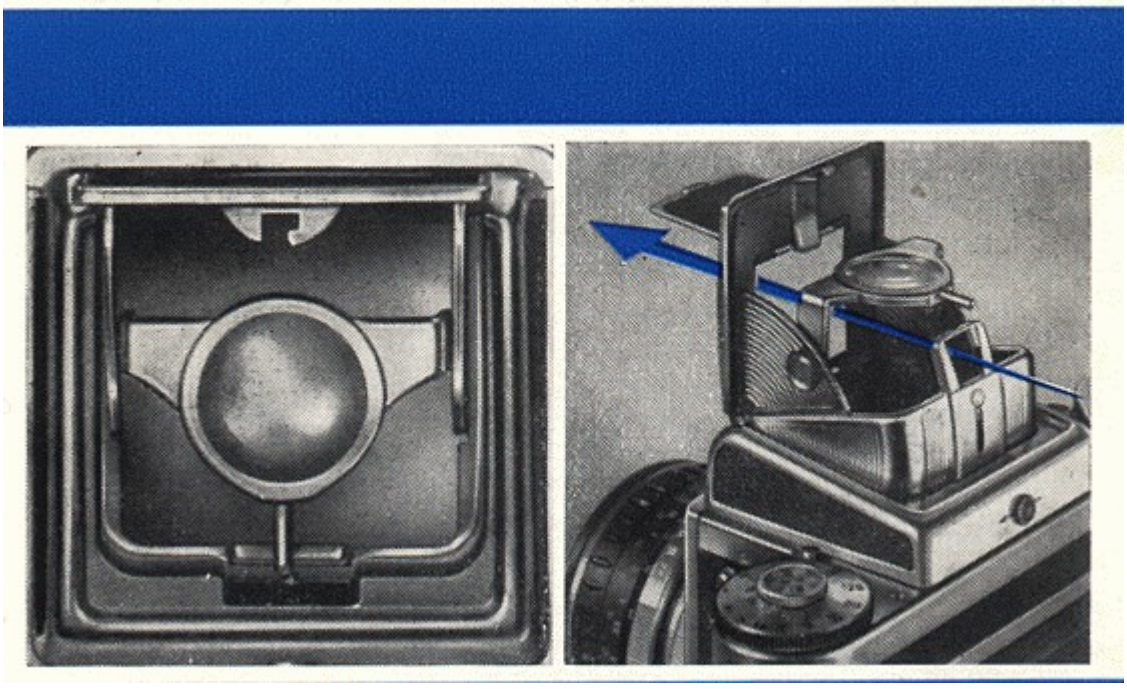


The finder hood

The finder hood (1) opens and springs into operating position as soon as you push knob (9) in the direction of the arrow. It is closed by fingertip pressure on the cover. The finder hood is automatically locked to the camera. To remove it, depress unlocking knob (11) on the camera top. The hood can then be pushed towards the back and lifted off.

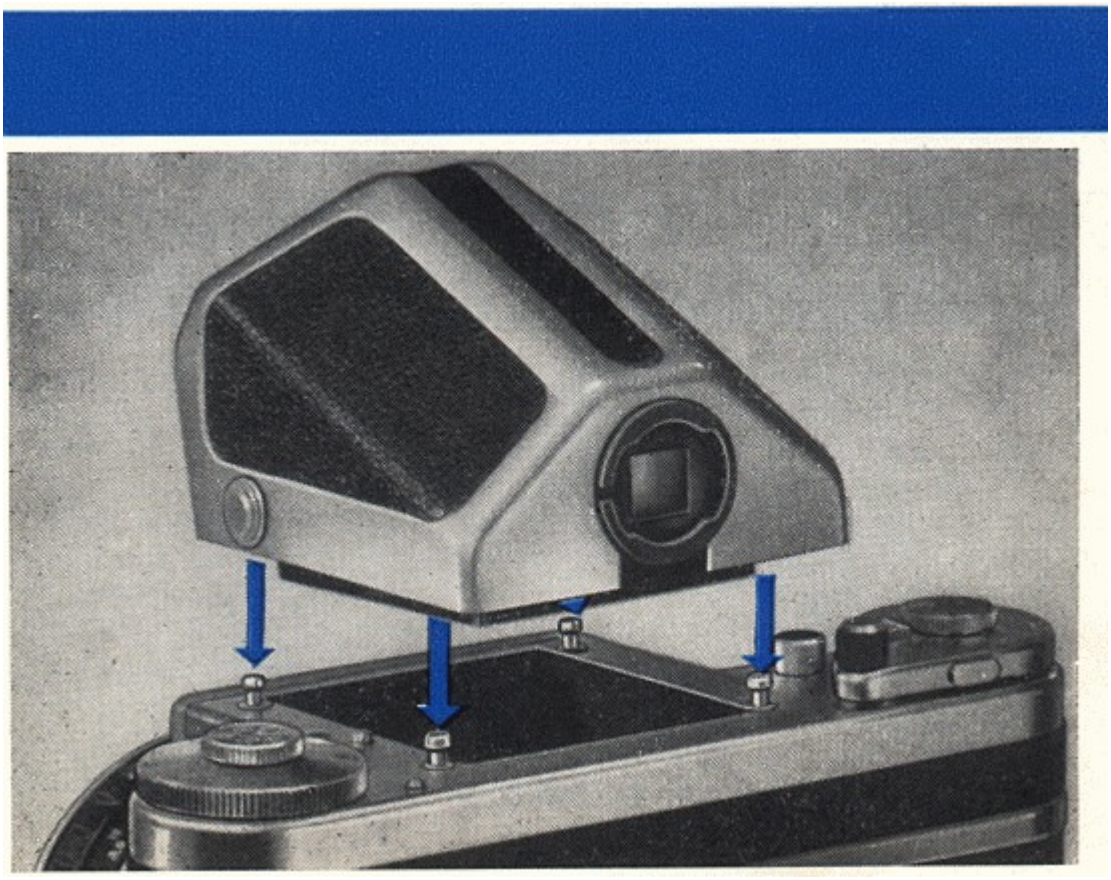


The Magnifier-Sportsfinder



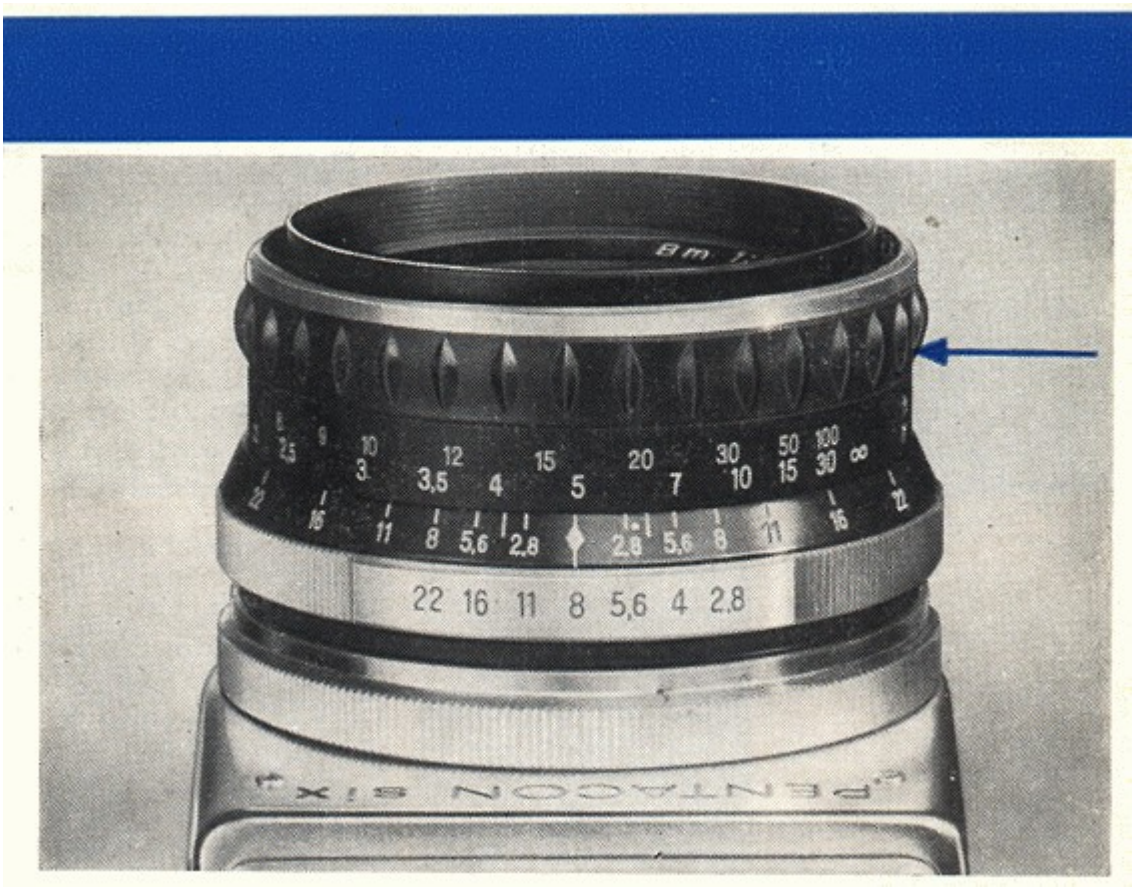
The Pentaprism

The Pentaprism permits viewing the image at eye level. It is inserted in place of the finder hood. The prism reveals the reflex image enlarged approximate 2.5 times and with sides unreversed. Persons with faulty eyesight may insert a corrective lens into the eyepiece of the viewfinder to replace their spectacles. Pull the two lateral catches simultaneously towards the back and place the Pentaprism on the four connecting pins on top of the camera. Release the catches, and Pentaprism snaps in. Removing the prism is performed accordingly.



Focusing

Focusing takes place with the mirror swung into viewing position, i.e. with the shutter wound up. Rotate focusing ring (22) on the lens mount until the image of the subject appears sharp on the field lens. Distance and definition may also be set by means of the scale on the lens mount, in which case the field lens serves only for determining picture composition. The depth of definition can be read in the focusing ring with the help of the depth of field scale (21). Engraved on the left and right of the index mark on the depth of field scale are diaphragm numerals. At the f 8 setting the depth of sharpness can be read from focusing ring above the true diaphragm numerals on the depth of field scale. I.e.: Distance five meters (15 feet), diaphragm setting f 8, depth of sharpness from 3.5 meters to approximately 9.5 meters = 10 feet to approximately 32 feet. When using the sports finder, focusing has to be performed beforehand either on the image field lens or by the scale of the focusing ring.



The diaphragm

The diaphragm is set by rotation of the diaphragm ring (his 20) on lens mount. The diaphragm numeral required for the exposure has to be brought to meet the red index mark. Lenses with automatic spring diaphragm allow for full aperture focusing. Not until the shutter is released, does the diaphragm close down to the preset aperture. To check the depth of field during focusing, you simply depress lever (19) on the lens mount. This causes the diaphragm to close down to the value preselected by means of setting ring (20).

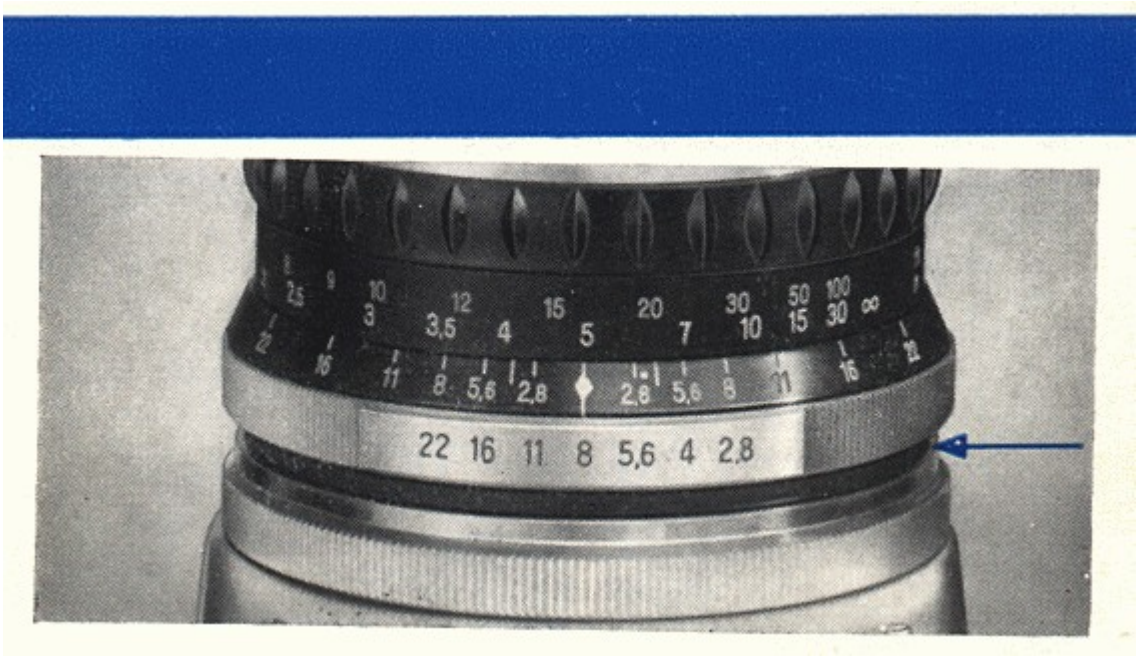
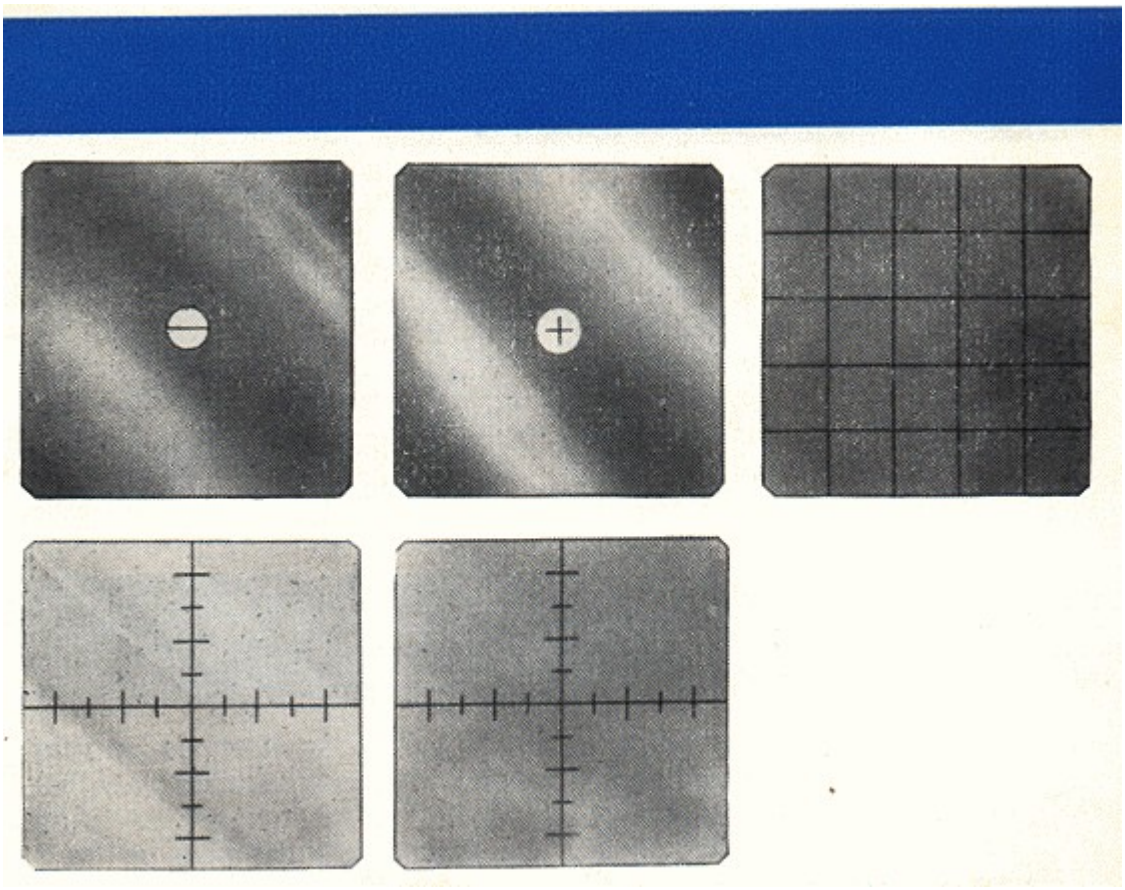


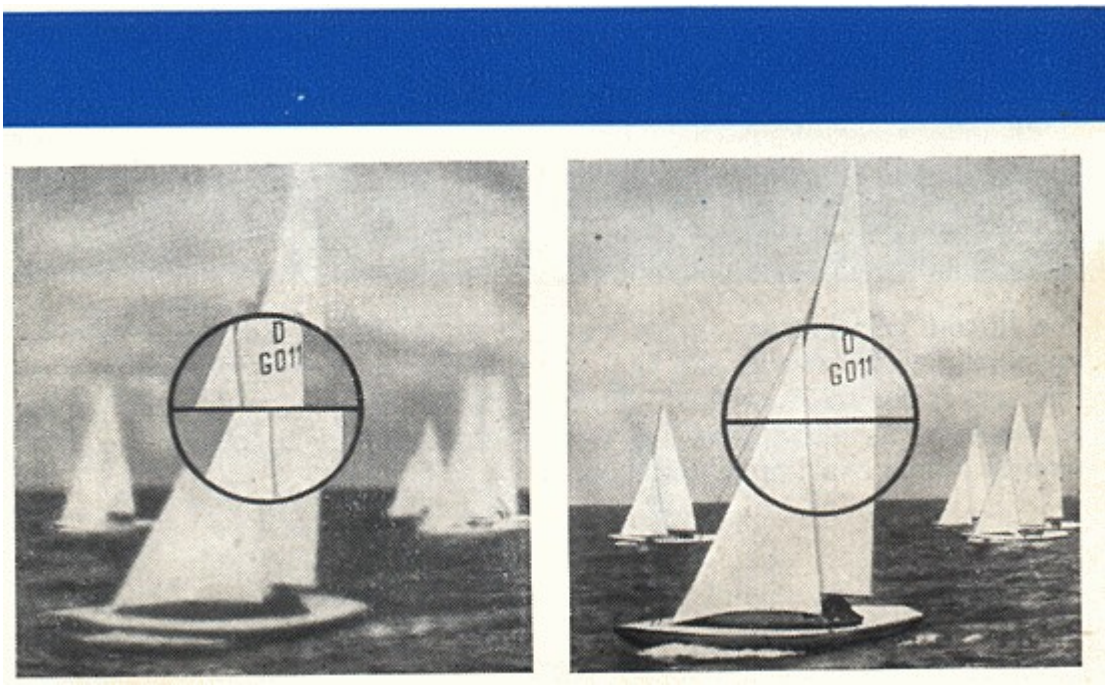
Image field lenses

6 different image field lenses are available for the Pentagon Six (see also the instructions for using "close-up equipment for Pentagon 6"). The field lenses are exchanged as follows: remove the finder element from the camera and then loosen the screws on the three remaining springs with a screwdriver. Swinging the springs aside take out the spring ring, and tip the image lens out of the camera. Fixing any one of the other field lenses is performed in reverse order. It is important to note that the thinner part of the lens must lie towards the back of the camera.



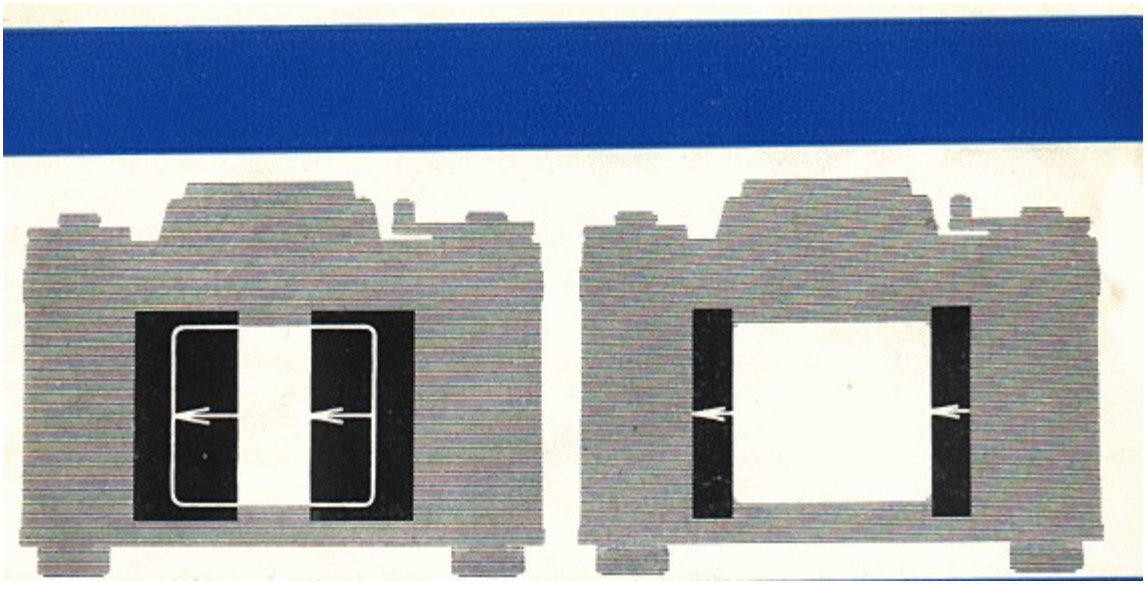
The rangefinder lens

The rangefinder lens forms two-part images. These are moved towards or away from each other by rotation of focusing ring (22). If the outlines join precisely where the two sections meet, the images is in correct focus. This can be observed best on straight vertical lines.



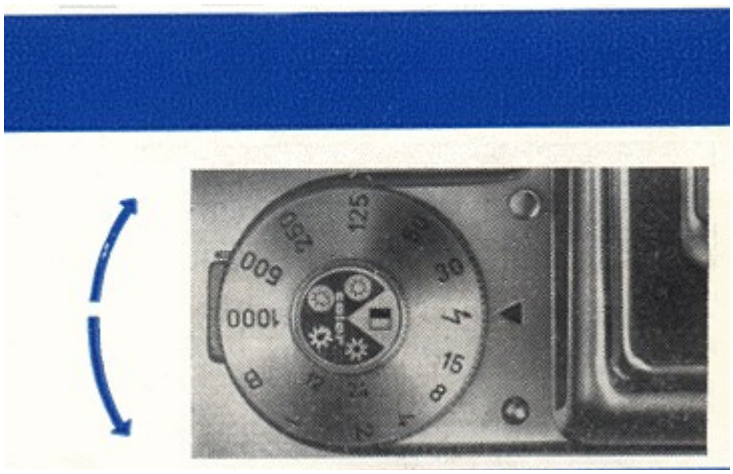
The focal plane shutter

The focal-plane shutter of the Pentacon Six gives exposure speeds ranging from one second to 1/1,000 of a second and B (any desired length of time). For exposure times longer than one second is advisable to use a special wire release with locking device. The speeds are graduated so that each figure indicates double or one-half of the speed marked by the next figure on the scale. The diaphragm scale works analogously. If the light value is to be maintained the next more aperture has to be employed for twice the exposure time, or vice versa.



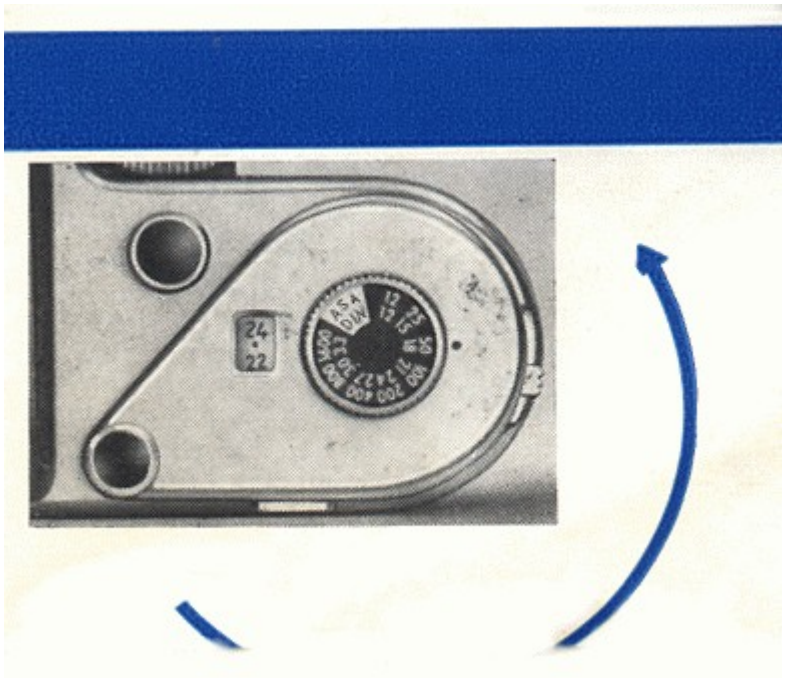
The exposure speeds

The exposure speeds may be set either before or after the shutter has been cocked. The speed shut setting dial (13) is rotatable in either direction. The desired exposure speeds figure must come to stand against the red triangle mark. The speed settings click in as a safeguard against unintentional displacement.



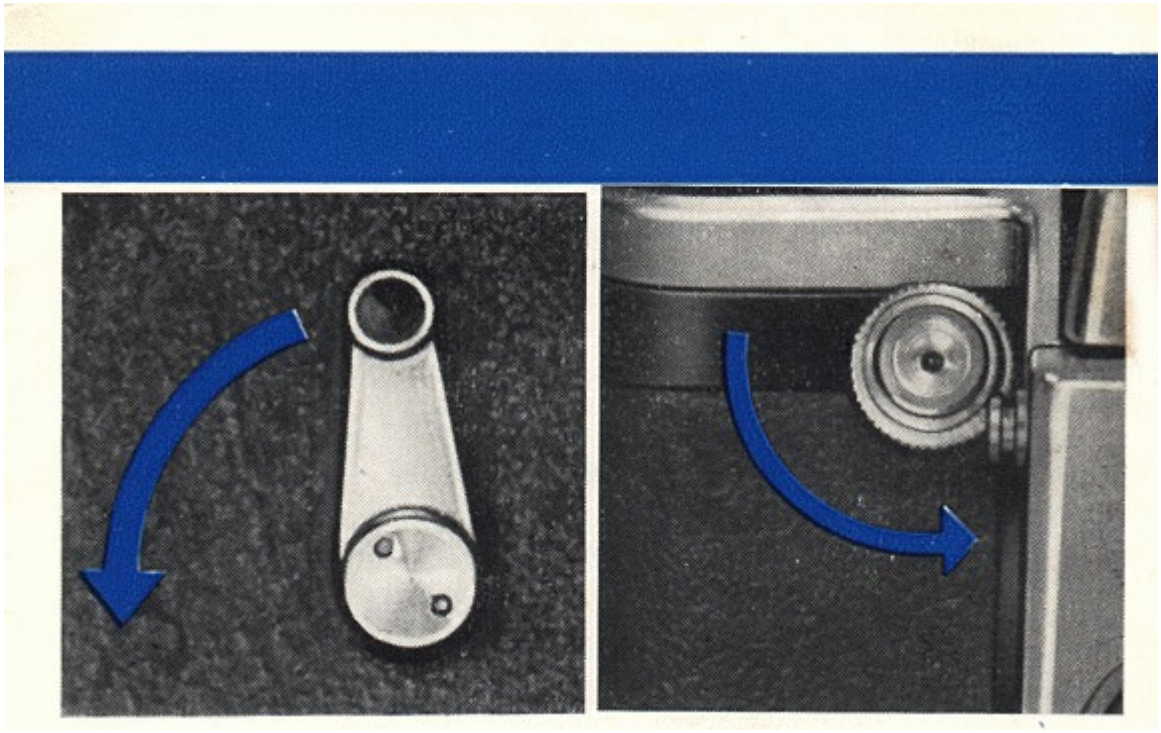
The rapid wind lever

The rapid wind lever serves not only to cock the shutter but simultaneously to transport the film. By this same performance the diaphragm is set to its widest aperture, the exposure counter switched to the next number and the mirror swung away to allow the light rays to reach the image field lens.



Delayed action mechanism - shutter release

The delayed action mechanism is actuated by swinging the winding lever (5) through about 90 degrees and operating the shutter release (4). The shutter must be cocked beforehand. The self-timer runs for approximately 10 seconds. It may be employed with all shutter speeds. The winding lever returns to its normal position after the shutter has been released. Locking the shutter release achieved by turning the lower milled ring (15) stop release knob (4) is anti-clockwise as far is it will go (red dot must be at the top). Inadvertent tripping of the shutter is thus made impossible. The shutter mechanism is unlocked by turning the milled ring back again.



Synchronization

Synchronization with electronic flash and bulbs is effected by means of the X contact. The flash socket (6) is built into lower part of the camera front. Clockwise rotation of the milled ring on the flash socket keeps the flash plug locked in position. When inserting or removing the flash plug make sure that the red dot on the milled ring stands opposite the red dot of front of the flash socket. For the use of electronic flash, the speed dial must be moved to the arrow setting, for short burning bulbs to 1/15 second or longer. For delayed action exposure to shutter release has to be depressed until the flash lights up. (Use cable release with locking device.) The correct diaphragm setting is found by dividing the guide number of the flash by the flash to subject distance figure.

Removing the film

Remove the film after exposing the 12" frame (on film 120) or the 24"' frame (on film 220) and subsequently winding up the paper trailer. After manipulation of disconnecting lever (3) the trailer has to be wound by full swings of the rapid wind lever followed by actuating of the shutter release

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until winding of the lever becomes noticeably easier. Do not advance the trailer by short rocking movements as were used when inserting the film (see page 3 and page 4)! Now open the camera, back, pull out the spool support and lock it. Tip the camera slightly, let the film spool full inch your hand and fasten the gumstrip to the paper trailer. Also (in case camera is fixed or tripod) the film spool can be lifted out by its lower spool flange, in which case it must rest against the upper part of the spool chamber with the carrier mechanism still engaged.

Exchanging lenses

Exchanging lenses is a quick and simple matter. Turn milled ring (18) of the bayonet fitting anticlockwise until it stops and remove the lens of the camera. The red mark on the scale of the lens to be inserted must be at the top, and the screw, or pin, on the inner edge of the lens mount has to engage in the recess in the lens seat of the camera (see illustration). To fasten lens tighten milled ring (18) by clockwise movement

Lenses

The standard lens, Jena Bm 80 mm F. 2.8 is equipped with automatic spring diaphragm control (ASD) no specific handling of the lens is necessary except setting the aperture required for the exposure. The diaphragm is automatically controlled by the camera. During the focusing procedure it is completely open.

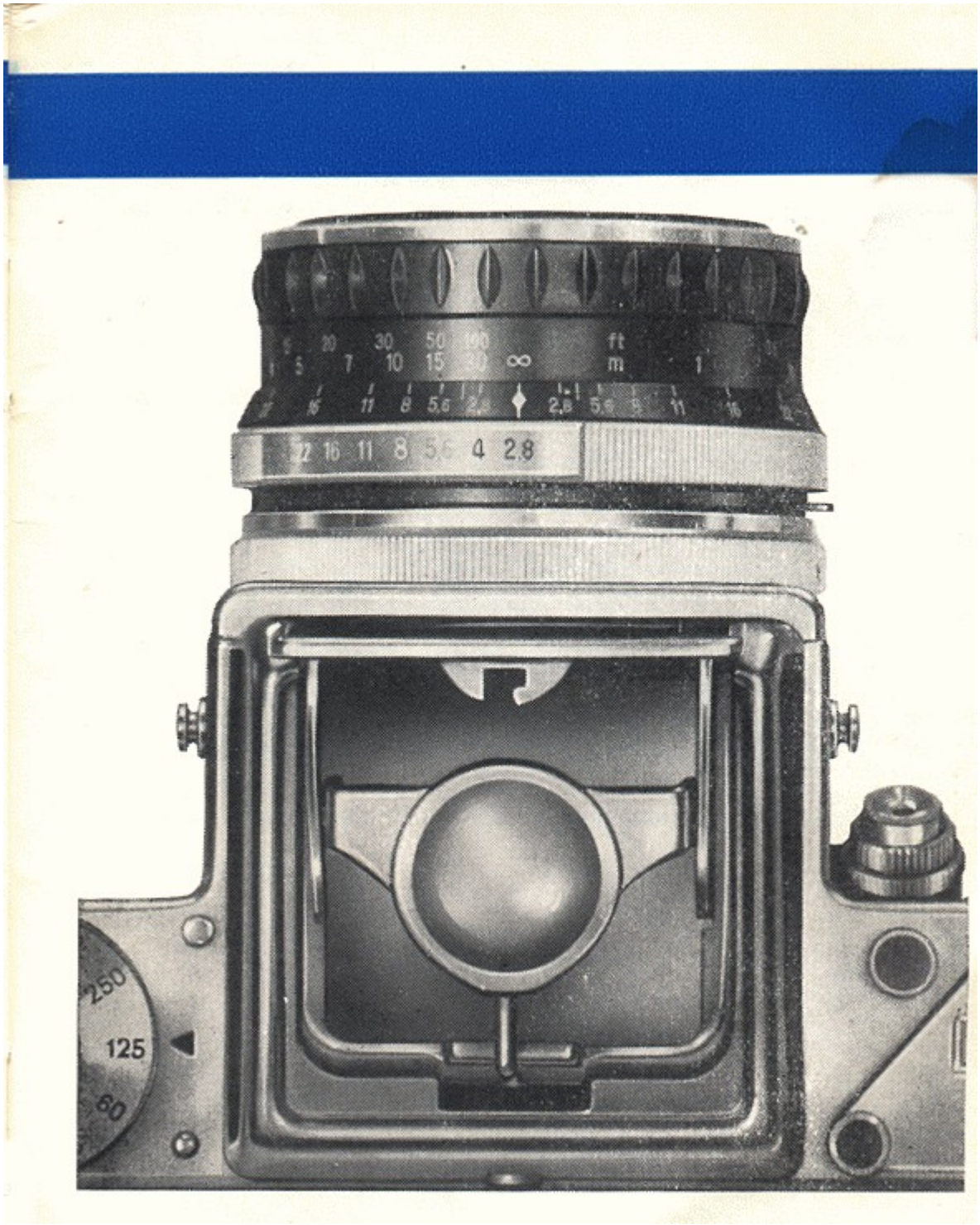
Supplementary lenses with automatic diaphragm

are operated in the same manner as described above for standard lenses. This applies both the setting the diaphragm stop and checking the depth of field.

Supplementary lenses without automatic diaphragm

(e.g. Telemegor 300 mm in F. 4.5 with manual preset diaphragm) is are set by pressing adjusting ring directly behind the diaphragm scale backwards adjusting it to bring its mark against the desired diaphragm numeral where it clicks in. This makes it possible also with these lenses to focus at full aperture. Immediately before making the exposure, you turn the diaphragm ring back to the preselected stop. With lenses of a longer focal length (exceeding 300 mm) the automatic diaphragm lever in the camera may project into the path of rays and can, therefore, be moved away from its normal working position towards the camera body. To achieve this, remove the lens from the camera and swing the

lever, which becomes visible on the left inside the opening, just far enough that it will not touch the camera body with shutter is cocked. Swing the lever back into operating position when lenses with automatic diaphragm are to be used.



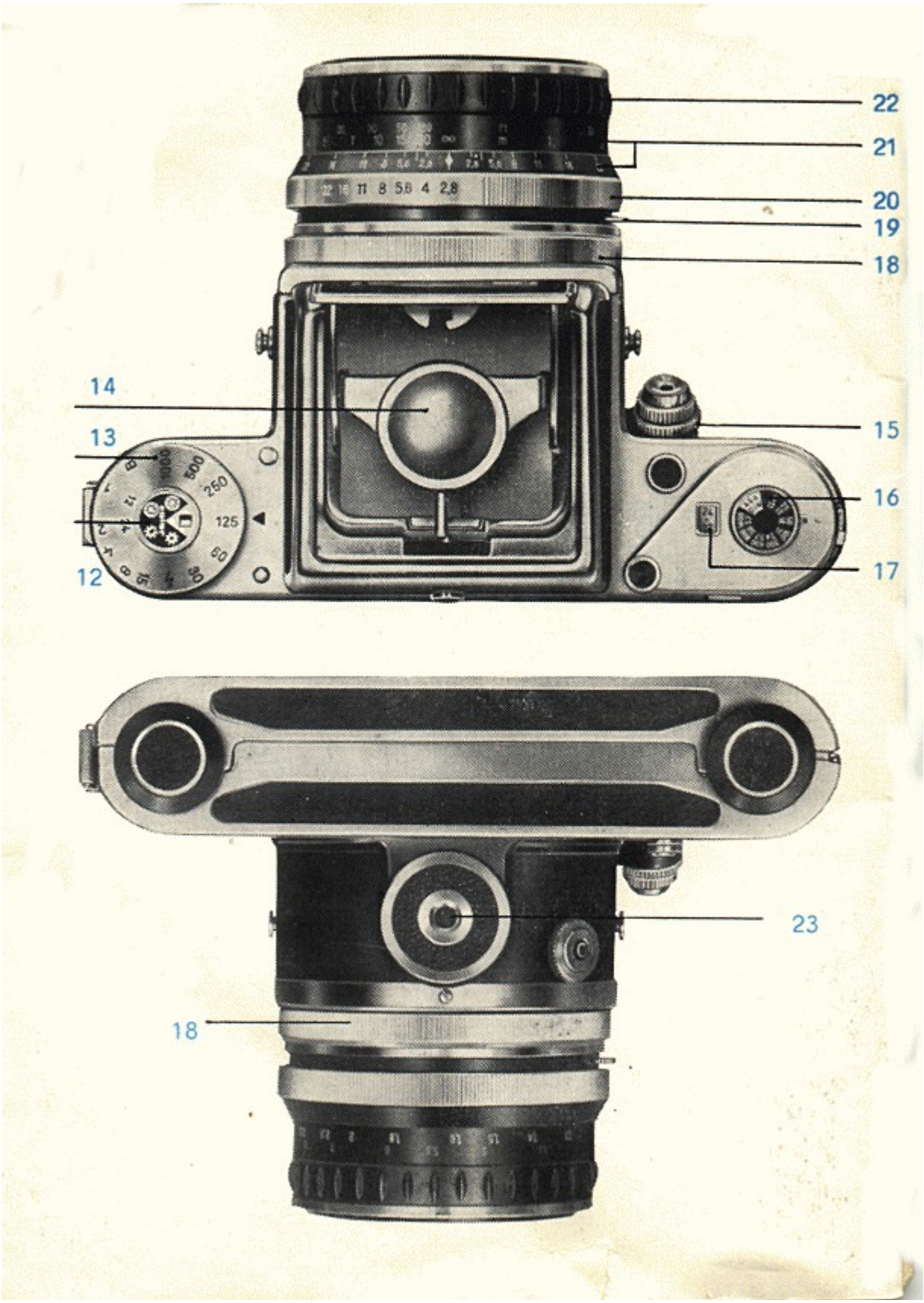
The following interchangeable lenses are available for the PENTACON 6:

Standard lens:

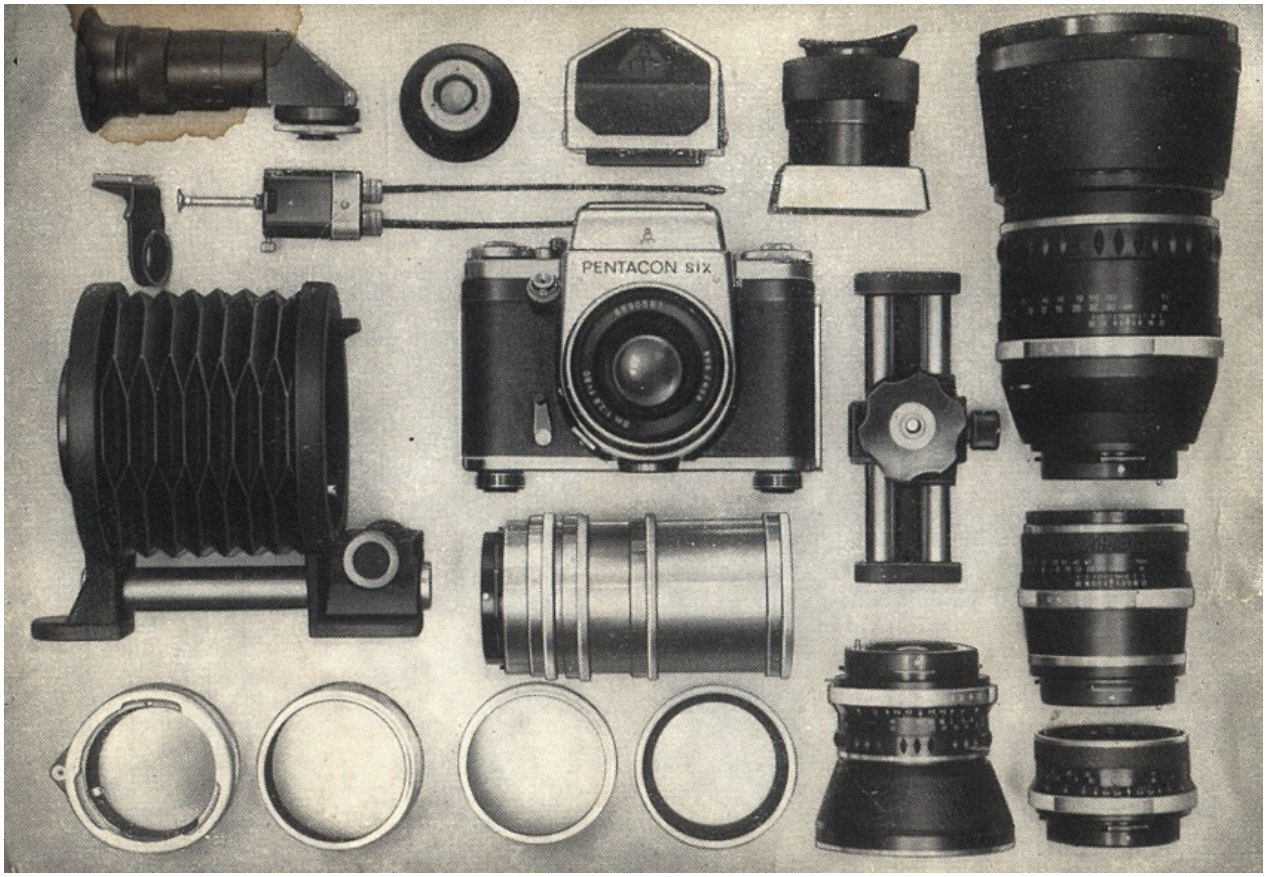
Supplementary lenses:

One final hint with regard to setting up the camera on a flat service. A screw (index No. 223650), to be threaded into the tripod socket of the camera, may be used as a third supporting point.

The details given in this book are subject to alterations which may result further development and manufacturing process



Please read these instructions for use carefully since we can except no liability for damage caused by improper handling of camera.



We trust that you have followed our explanations carefully up to this last page. It will certainly not have escaped your notice what a variety of possibilities your Pentagon Six has to offer you. But you'll find its radius of action extending further still when once you take advantage the wide range of accessories. You will be able to benefit not only from an accessory program capable of meeting every requirement, but also from the ease and simplicity in handling these accessories. As a ready mentioned above, this is possible only because of the unique finder system of the camera. The illustration opposite is to give you impression of this program but your photo dealer will be able to tell you more. He will gladly advise you how to adjust your Pentagon 6 to comply yet more satisfactorily with your personal wishes and requirement.